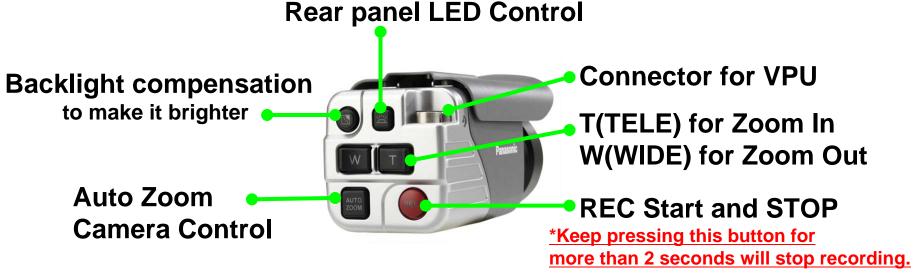
# Arbitrator (ARB-SI) ver.1.9 Basic Operation [For Officers]

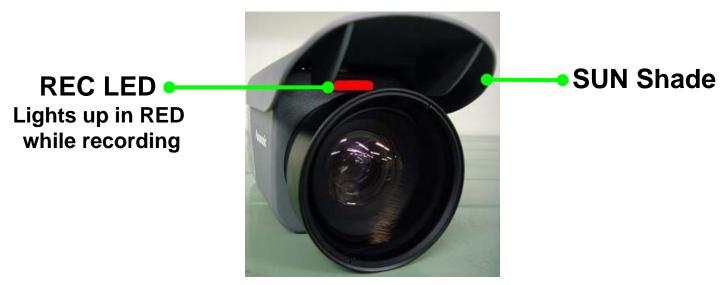
# Arbitrator (ARB-SI) Ver.1.9 Basic Operation for Officers

#### -Contents-

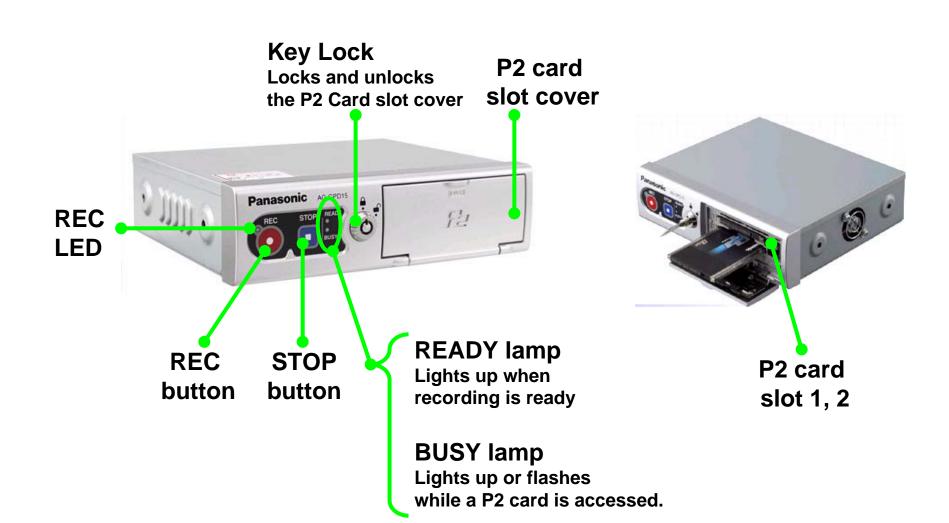
- (1) Control Reference Guide
  - Front Camera (AG-CK10P)
  - P2 Recorder-VPU (AG-CPD15P)
  - Digital Wireless Microphone (TDSS-900-PNA)
- (2) SI (Front End Application) "LIVE" Mode Menu for Officer
- (3) Record the video ("LIVE" Mode)
- (4) Playback the recorded video ("ARCHIVE" Mode)
- (5) Camera Control ("LIVE" Mode)
  Camera Control for LPR (License Plate Recognition) users
- (6) Officer Information Register at the beginning of shift ("LOGIN" Mode)
- (7) Upload the recorded file ("UPLOAD" Mode)
- (8) Restore the recorded file ("RESTORE" Mode)

# (1) Control Reference Guide Front Camera (AG-CK10P)





# (1) Control Reference Guide P2 Recorder - VPU (AG-CPD15P)



# Control Reference Guide Digital Wireless Microphone TX and RX (CCR24PNA)

Transmitter (TX) with Receiver (RX)



**TALK ON: Green LED** 

**BATT: Red-Charging, Green-Fully charged** 

TALK Button:

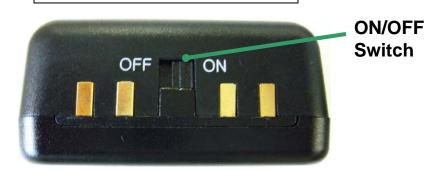
Press for REC

Lavalier Mic Input

MODE Selection Button

MUTE Button

**Transmitter (Bottom View)** 



Please refer to CCR24PNA User Guide for more operation information

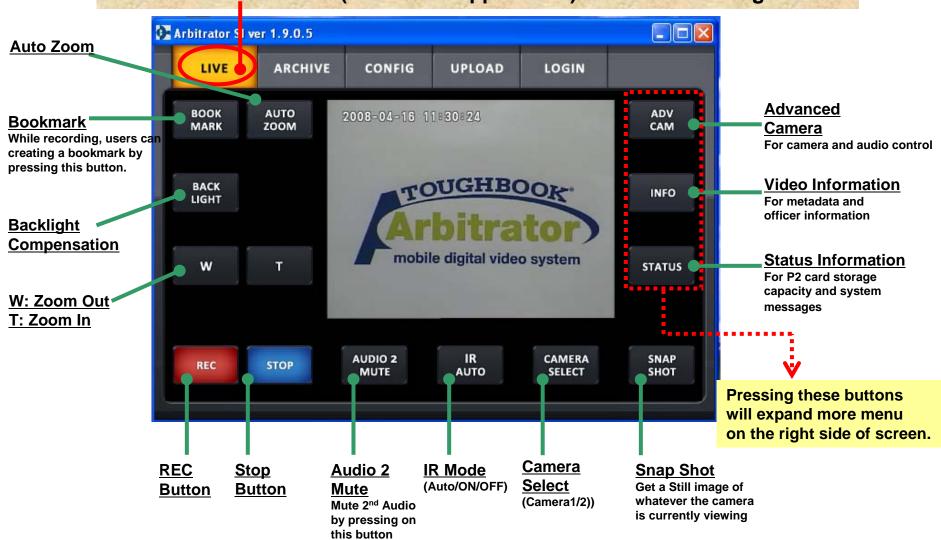
# Control Reference Guide (CCR24PNA Vibration / LED Indication)

Mode Selection	when Tx is ready	when Tx is under recording mode	when Tx is under "Low Battery" status	when Tx is under "Out Of Range" status	when Mute is initiated
Vibration	No Vibration	Vibration (one time only)	Vibration (1 time per second)	Vibration (2 times per 3 seconds)	Vibration (1 time per 5 seconds)
and LED	GREEN On	GREEN Blink	RED Blink	RED On	Tx is not recording:  GREEN On & RED Fast Blink  Tx is under recording:  GREEN Blink & RED Fast Blink
Vibration Only	No Vibration	Vibration (one time only)	Vibration (1 time per second)	Vibration (2 times per 3 seconds)	Vibration (1 time per 5 seconds)
None		No Vibration No LED			

- 1. Default mode when power on.
- 2. After synchronized, the mode goes back to the last.
- 3. Please refer to CCR24PNA User Guide for more operation information

# (2) SI (Front End Application) "LIVE" Mode Menu for Officer

Select "LIVE" tab of SI (Front End Application) for Live recording control.



### (2) SI (Front End Application)

"LIVE" Mode Menu for Officer



Pressing these buttons ("ADV CAM", "INFO", "STATUS") will expand the menu on the right side.

#### **ADV CAM (Advanced Camera)**

For camera and audio control (More detail in "Camera Control")



#### **INFO (Video Information)**

- (1) "META DATA" for GPS, Radar Gun, GPIO trigger information
- (2) "OFFICER" for Source, Area, Shift time, Officer 1, 2 information



#### **Status (Status Information)**

"Storage Capacity":

Show how much space has been taken on P2 card and how much time remaining

■"Status":

Any system message including errors, bookmark creation, snapshot will be displayed.

### (3) Record the video ("LIVE" Mode)

Press REC button for (1) VPU (P2 Recorder), (2) Camera (Rear Panel), or (3) "LIVE" tab of SI

\*If the trigger is set, VPU will start recording automatically when the trigger is on.



< VPU-P2 Recorder>



<Camera>

When recording, users can see the viewing pane surrounded in a red highlight and the letter "REC" in the upper left corner of SI (Front End Application)

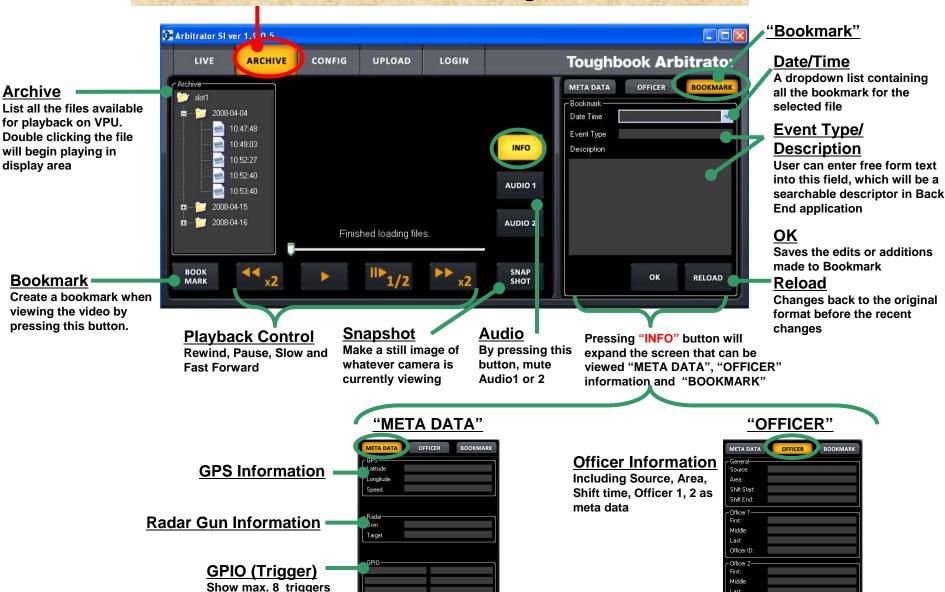
#### **How to Stop Recording the video?**

- (1) Press STOP button for VPU (P2 Recorder), or "Live" tab of SI.
- **Keep pressing the Camera REC button** for 2 seconds.

<SI-Front End Application>

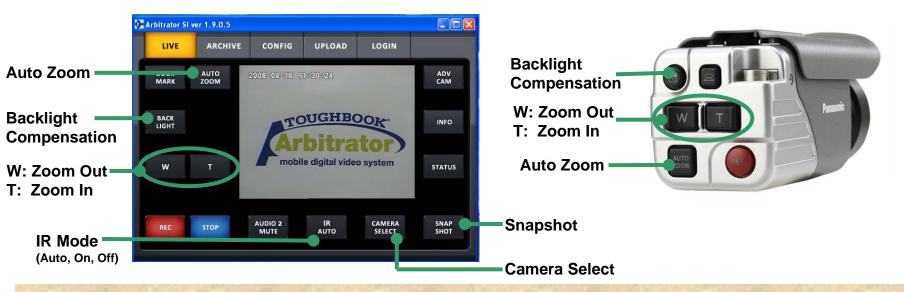
### (4) Playback the recorded video ("ARCHIVE" Mode)

Select "ARCHIVE" tab of SI for viewing the recorded video.



configured for the system

# (5) Camera Control ("LIVE" Mode)



Pressing "ADV CAM" button for camera and audio control will expand a more menu on the right side.
\*Initial LPR mode is disabled.

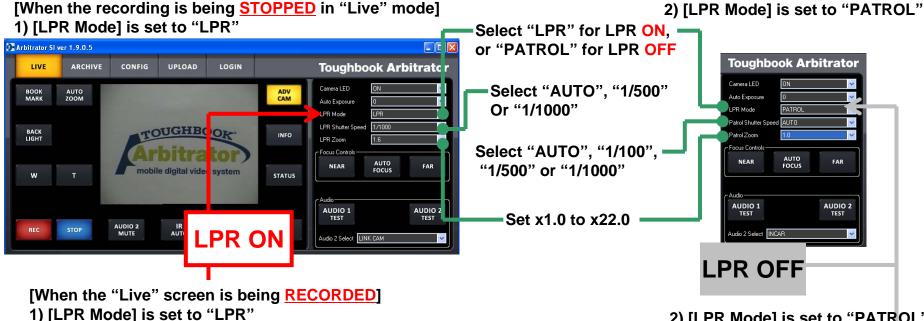


3. "LINKCAM" to change the Audio 1 or 2 by linking with the camera changes, \*Audio 1 for Wireless Mic 1 (Audio 1 in)

### (5) Camera Control

for LPR (License Plate Recognition) users ("LIVE" Mode)

This camera control is for LPR (License Plate Recognition) users. In order to use LPR mode, the administrator needs to set up "Init LPR Mode" as "Enable" in Admin/Camera menu.



Arpitrator SI ver 1.9.0.5 CONFIG UPLOAD LOGIN LIVE ARCHIVE Toughbook Arbitrator Camera LED ADV CAM Patrol Shutter Speed AUTO BACK LIGHT TOUGHBOOK INFO Focus Controls mobile digital video systen STATUS AUDIO 1 AUDIO 2 TEST Audio 2 Select LINK CAM

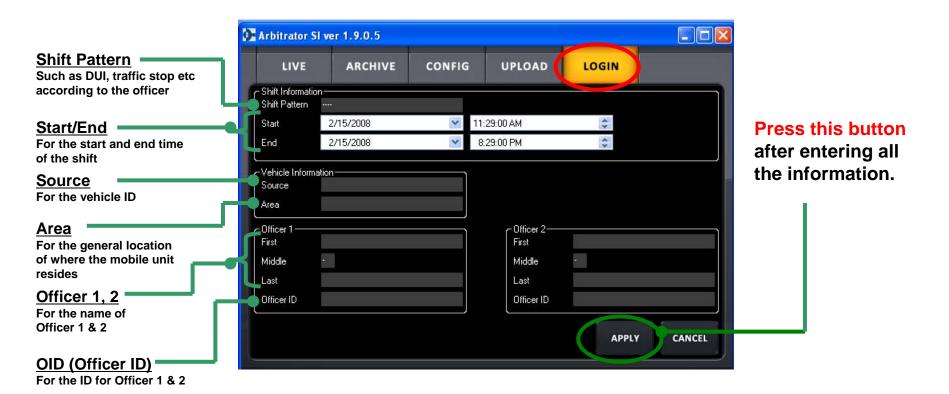
2) [LPR Mode] is set to "PATROL"

Toughbo	ok Arb	itrat	or
Camera LED	ON		~
Auto Exposure	0		V
LPR Mode	PATROL		
Patrol Shutter Speed	AUTO		~
Patrol Zoom	1.0		~
Focus Controls	_	,	
NEAR	AUTO FOCUS	FAR	
Audio AUDIO 1 TEST		AUDIO TEST	2
Audio 2 Select INC	AR .		<u>~</u>

# (6) Officer Information ("LOGIN" Mode) Register at the beginning of shift

#### [Register by "LOGIN" of SI]

- (1) Select "LOGIN" tab and type all the information (Shift, Vehicle, Officer name) at the beginning of shift.
- (2) After completing all the information, press "APPLY" button to register it.

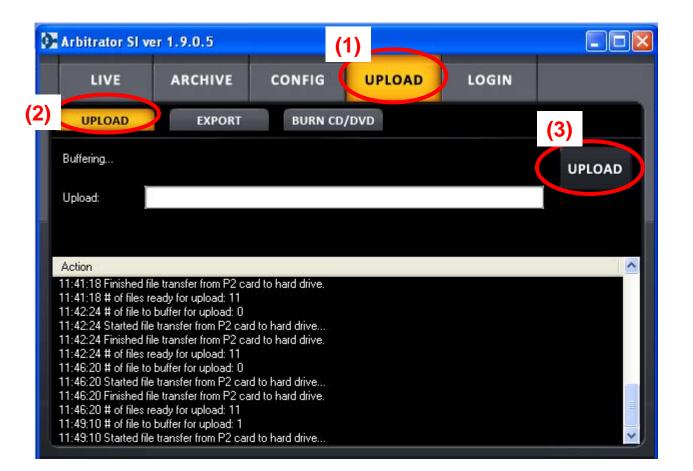


### (7) Upload the recorded file ("UPLOAD" Mode)

For "Manual"\* upload wirelessly, select (1) "UPLOAD" tab and press "UPLOAD" button (2), (3).

For "Auto"\* upload wirelessly, NO need to go to this "UPLOAD" menu and video will be automatically uploaded once getting into wireless network range.

\*If the administrator sets up "Use Auto Upload" as "False" at "CONFIG" menu, it will be "Manual" upload. If setting it up as "True", it will be "Auto" upload.



### (8) Restore the recorded file ("RESTORE" Mode)

"RESTORE" button will be appeared in the tab of SI when the video file is corrupted\* and cannot be played back.

\*The video file corruption will occur when the power to the VPU is lost or turned off while recording, or when a P2 card is removed while recording

- 1. Select "RESTORE" tab (1) of SI and press "RESTORE" button (2) to solve the file corruption and restore the file.
- 2. Then, "RESTORE" button will be disappeared and the file will be restored.



# Arbitrator (ARB-SI) ver. 1.9 Basic Set up & Operation [For Administrators]

# Arbitrator (ARB-SI) Ver.1.9 Basic Set up & Operation for Administrators

#### -Contents-

- (0) For the Arbitrator version 1.8 Users -How to upgrade to version 1.9?-
- (1) -Before Use, Format 16GB P2 Card
  -16GB P2 Card Format by Products / Combination with Windows version
- (2) "CONFIG" Menu for Administrator
- (3) REC/Play Set up
- (4) Camera Control: Auto Zoom / IR Set up
- (5) OSD (On Screen Display) Set up
- (6) UPLOAD
  - (a) Set up the location of the video that needs to be uploaded
  - (b)-1. WIRELESS UPLOAD
  - (b)-2. EXPORT
  - (b)-3. BURN CD/DVD
- (7) Trigger Set up by Administrator Stop recording by Trigger OFF
- (8) Menu (VPU settings) Copy
- (9) Auto Power Off Settings

APPENDIX: Setting Files for VPU by USB memory or P2 Card

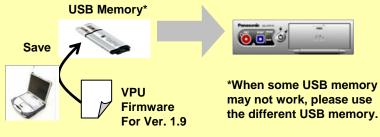
# (0) For the Arbitrator version 1.8(or earlier) Users -How to upgrade to version 1.9?-

If you have the version 1.8 or earlier of Arbitrator, it is necessary to upgrade both SI (Front End Application) and VPU firmware to the version 1.9 as the following procedure.

[Step 1] Upgrade VPU firmware FIRST by SI version 1.8 or earlier you currently run on PC.

- 1) Please save the VPU firmware for the version 1.9 to the USB memory or P2 card.
- 2) Connect that USB memory or P2 card to VPU and by SI menu, go to "Config", "Operations" and press

"Version up" to upgrade the VPU firmware.



[Step 2] Then, Upgrade to SI version 1.9

After upgrading the VPU firmware as [Step 1], please uninstall the SI you currently run and install the new SI version 1.9.

#### **REMARK**

If upgrading to SI version 1.9 first, you cannot operate the VPU because VPU firmware is still version 1.8 or earlier. Therefore, in order to upgrade the VPU firmware, please follow the above [Step1] 1). Connect the USB memory or P2 card to VPU. Leaving the P2 card slot open, follow the procedure in the chart below.

VERSION UP

REGISTER RADAR



Procedure	Duration	LED Display		
	(Sec)	REC	READY	BUSY
1) Keep pressing "STOP" button for 15 sec	15	OFF	OFF	OFF
2) Updating process for VPU microcomputer	45	ON	Flash	ON
3) Update complete		Flash	ON	Flash
4) Press "STOP" button to restart		Flash	Flash	Flash
5) Updating process for Front microcomputer	150	Flash	ON	ON
6) Version up complete		OFF	OFF	OFF



### (1) Before use, Format 16G P2 card by SI

- Formatting 16G P2 card is mandatory at the first time usage.
- When modified (copy, delete, move etc) folders in P2 Card, please format the card.
   (If you copy the folders/files from 5 slot P2 drive or PC PCMCIA to PC HDD, please format the card.)
- ●The format of 16G P2 card is available by Control Panel, 5 slot P2 drive and PC PCMCIA slot.
- Note that 16GB P2 card limit the number of files that can be recorded per below chart.

# of	# of maximum recording files per day		
recording days	With Bookmark	Without Bookmark	
62 days	340 files	508 files	

#### <How to format by SI?>

- (a) Insert new 16GB P2 cards to P2 Recorder (VPU)
- (b) Go to "Config" by SI menu and select "Operations".

  Press "Format" and then select "Yes"
- (c) Press "Format" and select "Yes".

  Then, "Format finished successfully" message will be appeared when the format is completed.

(Press "Yes" to complete.)





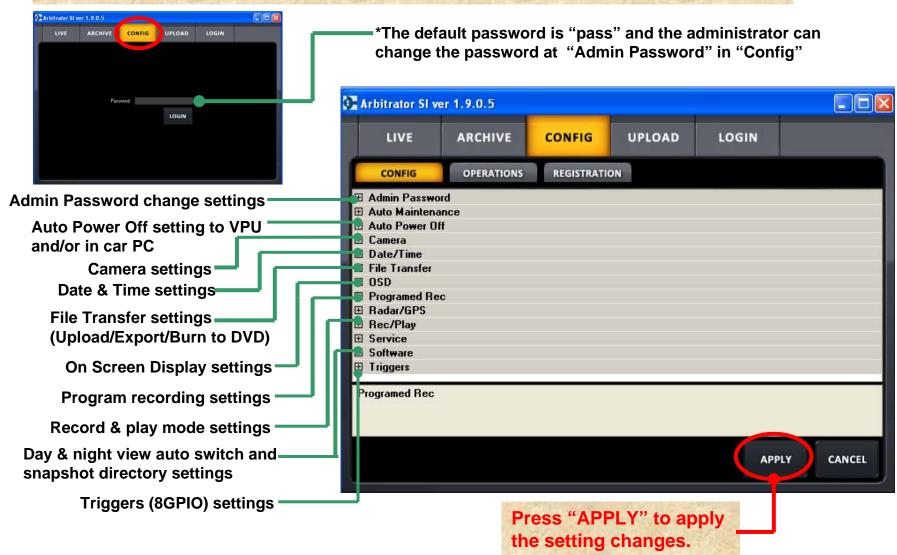
# (1) 16GB P2 Card Format by Products / Combination with Windows version

Format by	How to format?	
SI (FE Application)	By SI Menu, go to "Config"-"Operations"-"Format".	
Control Panel	By Control Panel Menu, go to "Setup Info"-"Admin"-"File Management"- "Format"	
PC PCMCIA slot (Windows)	Before format, install the P2 driver (from "P2 ICV Filter w/ P2 Drivers" CD included in Arbitrator kit) to PC. Then, select the removable disc drive in PC that inserted P2 card. Right click on that drive and select "format"	
5 slot P2 Drive (AJ-PCD20P)	Before format, install the P2 driver (from "P2 ICV Filter w/ P2 Drivers" CD included in Arbitrator kit) to PC. Then, select the removable disc drive in PC that inserted P2 card. Right click on that drive and select "format"	
P2 Store (AJ-PCS060G)	Before format, Install the P2 driver (from "P2 ICV Filter w/ P2 Drivers" CD included in Arbitrator kit) to PC. Then, press "Format P2C" button on the unit	

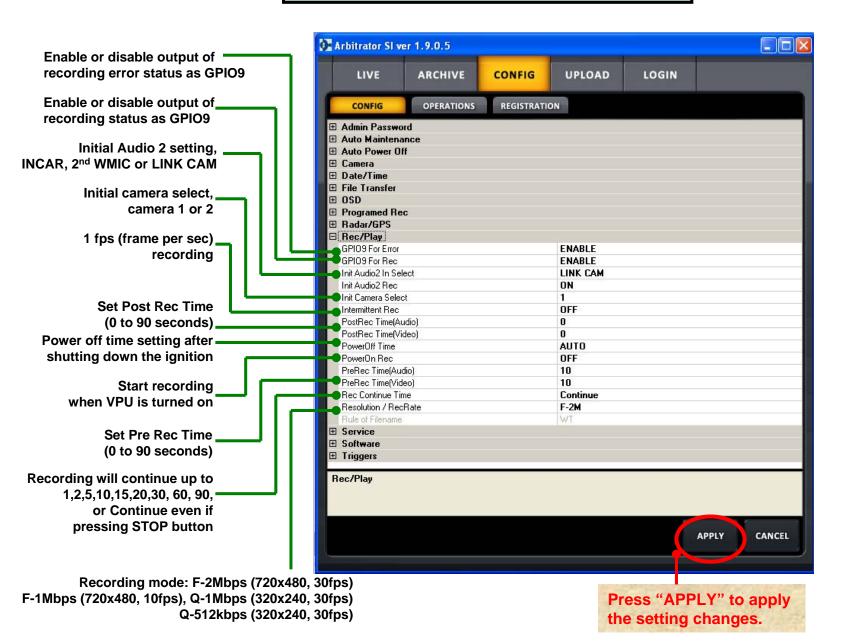
	Vista	XP Pro SP2	2000 Pro SP4 + Hot Fix	Server 2003
PCMCIA slot (Card Bus) in PC	Y	Y	N	N
5 slot P2 Drive (AJ-PCD20P) through USB	Y	Y	Y	N
5 slot P2 Drive (AJ-PCD20P) though IEEE1394	Y	Y	N	N
P2 Store (AJ-PCS060G) through USB	Y	Y	Υ	N

### (2) "CONFIG" Menu for Administrator

- 1. Select "CONFIG" tab of SI and enter the password\* to log in.
- 2. Then, "CONFIG", "OPERATIONS" and "REGISTRATION" tab will be appeared. Press "CONFIG" for configuring all the system settings.

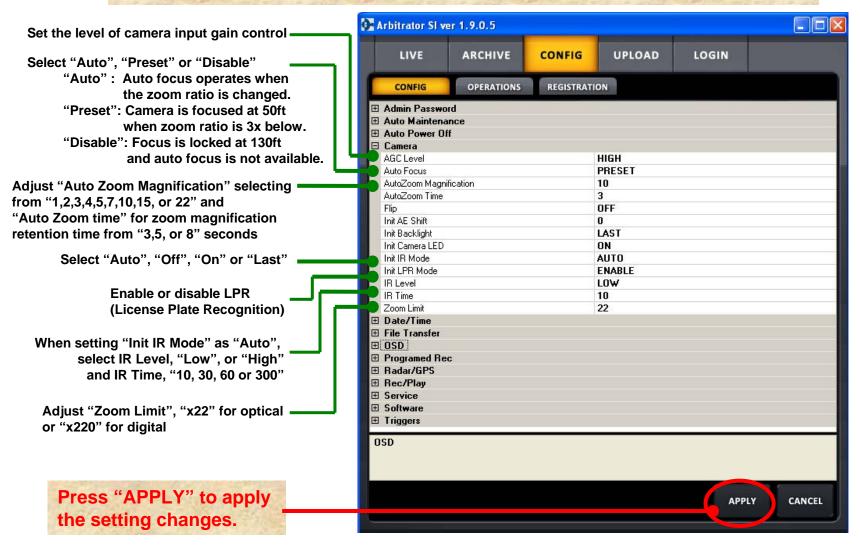


### (3) REC/Play Set up



# (4) Camera Control Auto Zoom / IR Set up

- 1. Select "CONFIG" tab of SI and enter the password\* to log in.
- 2. Then, press "CONFIG" and select "Camera".



### (5) OSD (On Screen Display) Set up



- 1. Select "CONFIG" tab of SI and enter the password to log in.
- 2. Then, press "CONFIG" and select "OSD".

\*OSD (On Screen Display) for the Date/Time, Trigger and Source (Vehicle-ID)/Area set up by Administrator will be included in the recorded file.

- "Source (Vehicle ID) @ Area" will be displayed on screen and recorded in the recorded file.
  - "Printable (A to Z)" of the trigger will be displayed on screen and recorded in the recorded file.



#### <u>"Source (Vehicle ID) @ Area"</u>

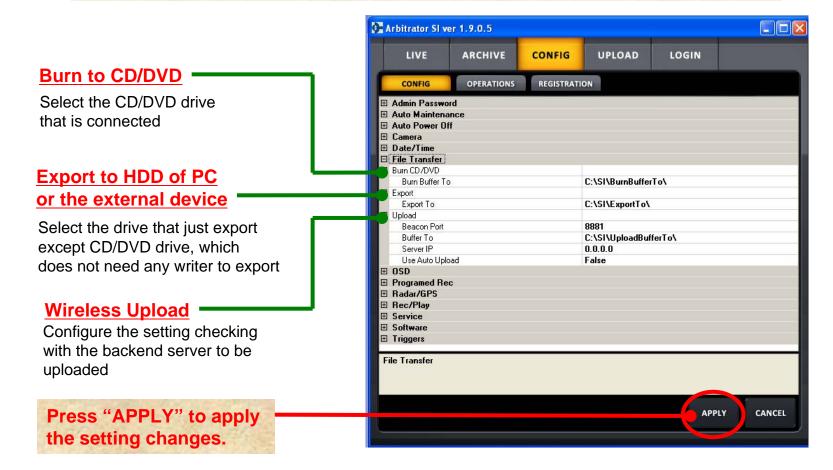
- \*1. Source (Vehicle ID) and Area need to be set up "LOGIN" menu.
- \*2. Total 10 letters of "Source @ Area" will be displayed on screen. For example, if Vehicle ID is "1234567" and Area is "California", it will be "12345@Cali" appeared on screen.

#### "Printable (A to Z)" of the trigger

\*Printable (A to Z) needs to be set up at "CONFIG" menu-"Triggers".

### (6) Upload

- (a) Set up the location of the video that needs to be uploaded
- 1. Select "CONFIG" tab of SI and enter the password\* to log in.
- 2. Then, press "CONFIG" and select "File Transfer" for the location of video that needs to be uploaded.



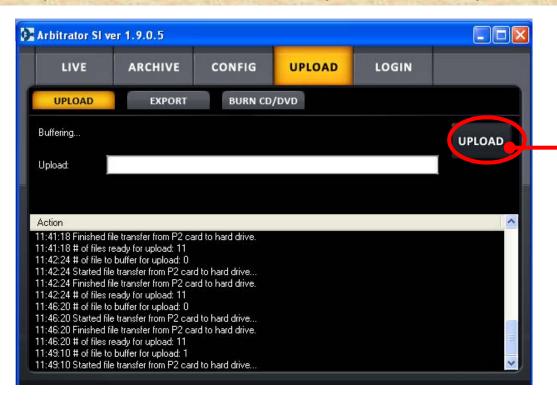
# (6) Upload (b)-1. WIRELESS UPLOAD

- 1. Select "UPLOAD" tab of SI and press "UPLOAD"
- 2. If Administrator sets up as Manual upload at "CONFIG"\*, officer needs to press "UPLOAD" button when upload.

(\*Menu: "CONFIG"-"File Transfer"-"Upload"-"Use Auto Upload"="False")

3. If Administrator sets up as Auto upload at "CONFIG"\*, officer does NOT need to press "UPLOAD" button and video is automatically uploaded.

(\*Menu: "CONFIG"-"File Transfer"-"Upload"-"Use Auto Upload"="True")

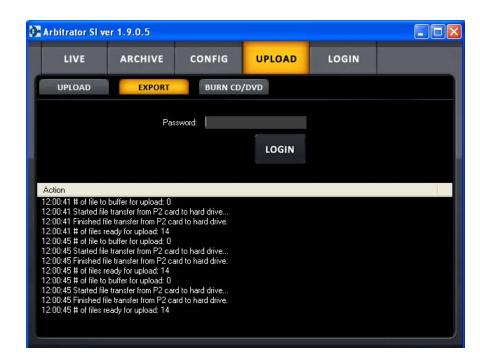


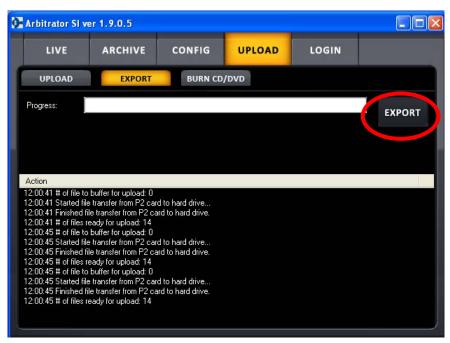
\*When setting up as Manual at "Config", Need to press this button. \*When setting up as Auto at "Config", No need to press this button

# (6) Upload (b)-2. EXPORT

- 1. Select "UPLOAD" tab of SI and press "EXPORT" and enter the password\* to log in.
- 2. Then, press "EXPORT" button and video will be exported to the location where administrator set up at "CONFIG".

  (Menu: "CONFIG"-""File Transfer"-"Export")

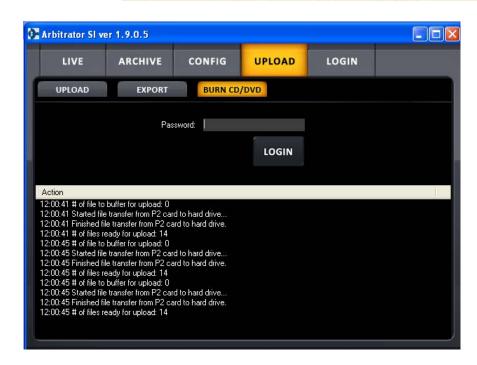


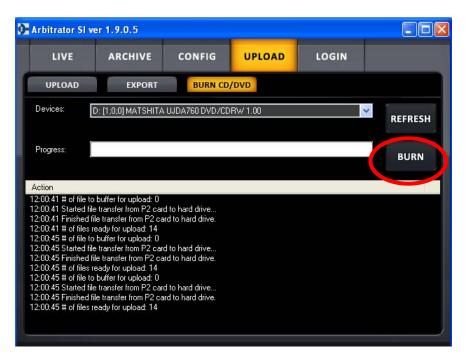


\*The default password is "pass" and the administrator can change the password at "Admin Password" in "Config"

# (6) Upload (b)-3. BURN CD/DVD

- 1. Select "UPLOAD" tab of SI and press "BURN CD/DVD" and enter the password\* to log in.
- 2. Then, select "Devices" and press "BURN" button and video will be burned to CD/DVD where administrator set up at "CONFIG". (Menu: "CONFIG"-""File Transfer"-"Burn CD/DVD")

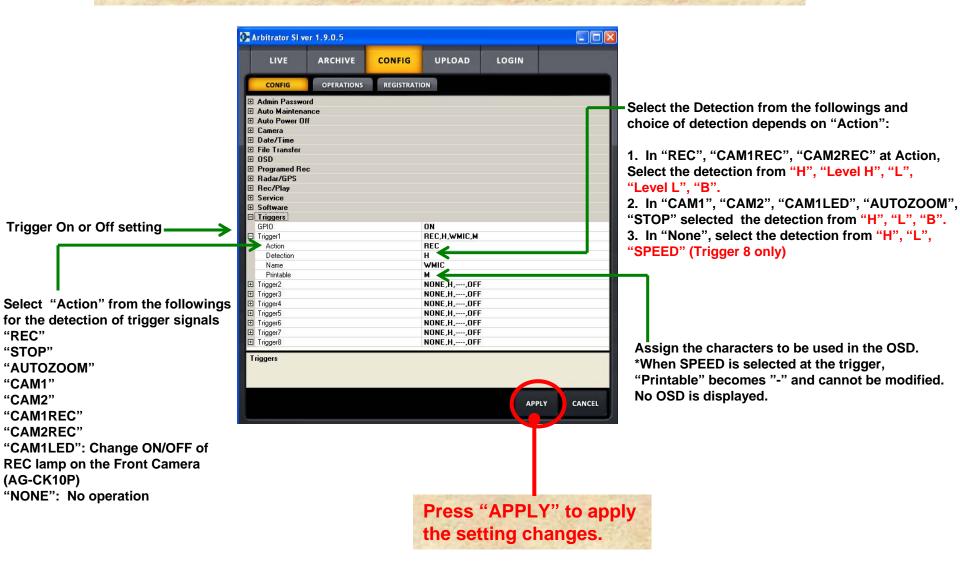




\*The default password is "pass" and the administrator can change the password at "Admin Password" in "Config"

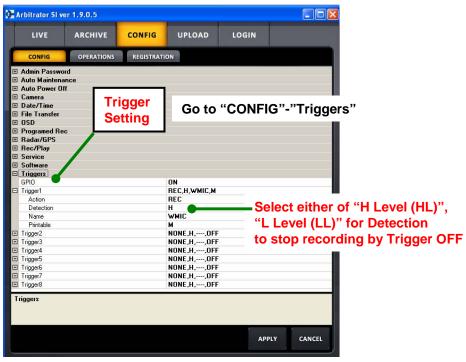
### (7) Trigger Set up

- 1. Select "CONFIG" tab of SI and enter the password to log in.
- 2. Then, press "CONFIG" and select "Triggers".



# (7) Trigger Set up - Stop recording by Trigger OFF





Stop Recording by Trigger OFF	Detection (Level Signal Setting)	REC Continue Time (Timer Setting)	Stop Recording Priority
Yes	Yes (Level H or Level L) ex. Level H	No ("Continue")	1) "STOP" button is pressed. 2) Trigger OFF
	STOP REC STOP	Yes ("1 – 90")	1) "STOP" button is pressed. 2) Trigger OFF 3) "REC Continue Time"
No	No (H, L, No, or B)	No ("Continue")	"STOP" button is pressed.
		Yes ("1 – 90")	1) "STOP" button is pressed. 2) "REC Continue Time"

[Remark] 1. If setting up more than 2 triggers as Level Signal, start recording when the 1<sup>st</sup> trigger is turned on and stop recording when all triggers set up as Level Signal are turned off.

2. Minimum recording time is 1 minute when setting up the trigger as Level Signal.

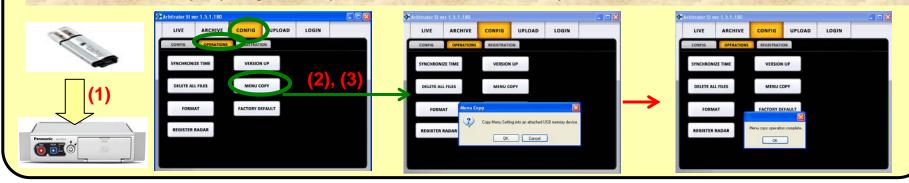
## (8) Menu (VPU settings) Copy

[Step 1] Get a setting configuration file from the VPU which settings need to be copied to other VPUs.

- (1) Plug an USB memory\* to the VPU which settings need to be copied to other VPUs.
- (2) Select "CONFIG" tab of SI and enter the password to log in.
- (3) Press "Operation" and "MENU COPY" button if you agree to copy menu settings to the USB memory.

\*This action creates a setting configuration file in the USB memory. Please use the USB memory to get the setting configuration file because even if inserting a P2 card, it cannot be created in the P2 card.

When some USB memory may not get the file, please use the different USB memory.



#### [Step 2] Copy the settings to the 2<sup>nd</sup> VPU.

Plug the USB memory stored a setting configuration file at [Step 1] to the 2<sup>nd</sup> VPU. Leaving the P2 card slot open, follow the procedure in the chart below.

\*Menu/VPU setting, Administrator/Officer information, Event Type (Bookmark) and Radar setting will be copied, but the following data will NOT be copied: Operating Time for AG-CPD15/Fan/CAM1/AG-RCP30, LCD Lighting Time, BIOS creation date, Last Errors, Version for AG-CPD15/AG-RCP30/Microcontroller



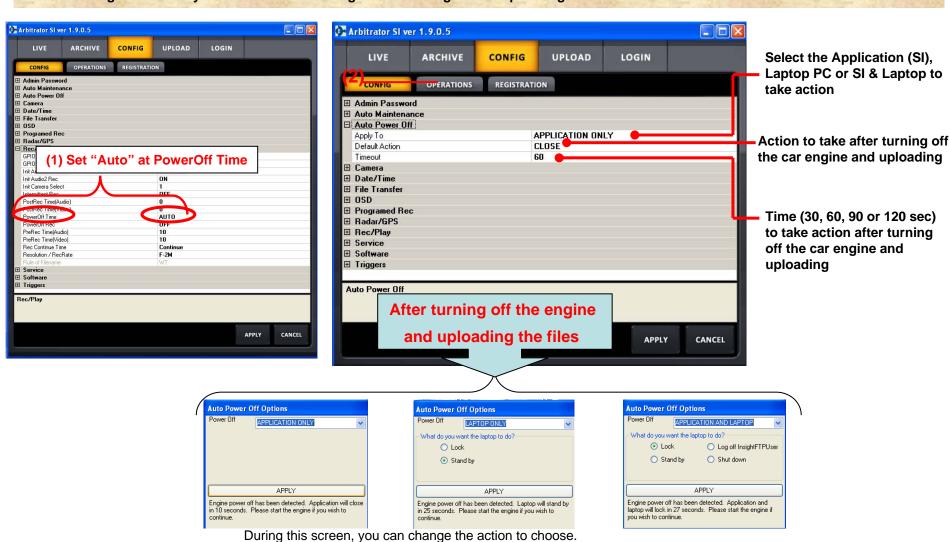
Procedure	Duration		LED Display		
	(Sec)	REC	READY	BUSY	
1) Keep pressing "REC" button for 10 Sec till "Ready" or "Busy" lamp starts to flash	10	OFF	(Flash) Either LED	(Flash) will flash	
2) Loading a configuration file	20 to 50	ON	Flash	ON	
3) Press "STOP" button when "Ready" lamp lights ( "REC"/"Busy" lamp starts to flash.)		Flash	ON	Flash	
4) Reboot and the copy completed.		OFF	OFF	OFF	

### (9) Auto Power Off Settings

"Auto Power Off" function enables to shut down the SI (Application), In car PC and VPU\* automatically after turning off the car engine and uploading the files.

- (1) Set up "Auto" as Power Off Timer under "Config" and "Rec/Play".
- (2) Go to "Auto Power Off" under "Config" and select which actions to take after uploading.

\*In this setting VPU is always turned off after turning off the car engine and uploading the files.



#### **APPENDIX: Setting Files for VPU by USB memory or P2 Card**

The chart below indicates whether USB memory or P2 card can be used for each file to be loaded to VPU.

	<b>USB Memory</b>	P2 Card
VPU Firmware Upgrade File*1	YES	YES  Please format P2 card by PC and save the VPU firmware before upgrading it.
Officer/Administrator Information Text File*2	YES	NO
Event Type Text File*2	YES	NO
Menu Copy Setting Configuration File (to get from the original VPU)	YES	NO

<sup>\*1:</sup> Please DO NOT save any other files or folders except VPU Firmware Upgrade File into USB memory or P2 card.

If saving the files under some other folder to USB memory, no information will be loaded to the VPU.

Even If saving some other folders together with "WIDKEY" folder (including these text files) to USB memory, these information will be loaded to VPU.

<sup>\*2:</sup> Please make sure to save these text files under "WIDKEY" folder to USB memory.